Approach to Revising NSR Regulations

Clean Air Act Task Force
Permit and Fees Committee
NSR Retooling TAG

October 5, 2005

NSR Reform Provisions

- **Finalized Changes From Dec. 31, 2002:**
  - **Baseline Actual Emissions**
  - **Actual-to-Projected-Actual Applicability Test**
  - **Plantwide Applicability Limitations (PALs)**
  - **Clean Unit Test**
  - **Pollution Control Project (PCP) Exclusion**

Implementation by States

- **For delegated States, new rules became effective March 3, 2003 (60 days from publication in the Federal Register.)**
- **For SIP-approved States, rule changes due within 3 years from publication in the Federal Register to amend their SIPs or, alternatively, must demonstrate that the State program is at least as stringent as new rules.**

State Implementation Issues

- **The new rules establish the minimum requirements for PSD/NSR programs. Any approved State or local agency must certify that their program is at least as stringent as the EPA program**
- **EPA HQ and Regional Offices will determine procedures for certifying programs**

Wisconsin Efforts towards PSD Changes thus Far

- **Governor/AG Decision to Join Suit**
- **Governor Decision to Move Forward on Rule Revisions**
- **NSR Retooling TAG formed summer ‘03**
- **Draft Rules Created/Comments Received winter ‘03-’04**
- **Rule Revisions Held September ‘04 Pending Court Decision**

June 25, 2005

- D.C. Circuit Court of Appeals Rules
  - Upheld
    - Applicability Tests
    - Plantwide Applicability Limits
  - Withdrew
    - Clean Unit Tests
    - Pollution Control Projects
  - Remanded
    - Record keeping requirements
- EPA considering Rehearing on Clean Unit withdrawal and asking whether PCP decision is retroactive
- Industry requested rehearing on NSPS test decision of this Court

Wisconsin's NSR Future

- **Adopt Federal Rule Revisions that the Court Upheld**
- **Do not Include those Revisions that were withdrawn by the Court**
- **Do not include any Federal Rule refinements suggested by the TAG except:**
- **Insert Record Keeping that Court had Remanded**

- **Include Interface to Minor NSR/Title V**

Baseline Actual Emissions

Determining the "past actual" emissions for measuring emissions increases

"Actual Emissions": Previous Requirements for non-EUSGUs

- **Averaging of the annual emissions for a two-year period preceding the project which is representative of normal operations;**

OR

- **Another period if it is determined to be more representative of operations by the reviewing authority.**

2005-2004

"Baseline Actual Emissions": New Requirements for non-EUSGUs

- **Average annual emissions that occurred during any consecutive 24-month period in the past 10 years.**
  - **Adjust to reflect current emissions control requirements**
  - **Reduce for any emissions that exceeded allowable emissions**
  - **Available only if adequate data is available for the selected time period**
  - **Use same 24-month period for all emissions units involved in project**
  - **Different 24-month periods can be selected for different air contaminants**
  - **Include start-up, shutdowns and malfunction emissions**

Baseline Actual Emissions:
WEPCO Provision for EUSGUs (unchanged)

- **Baseline actual emissions are based on any consecutive 24-month period within 5 years immediately preceding the project**
- **A different period may be used if the reviewing authority agrees that it is more representative of normal operations**

Using Baseline Actual Emissions

- **Baseline Actual Emissions will be used for:**
  - **Determining emissions increase resulting from project**
  - **Computing contemporaneous emissions increase**
  - **Establishing a PAL**

- **Old "Actual Emissions" definition retained for:**
  - **Conducting air quality analyses (NAAQS, PSD increments, AQRVs)**
  - **Computing offsets required**

Actual-to-Projected-Actual Test

Major NSR Applicability Test

Applicability Test:
Old NSR Requirements

- **Non-EUSGUs and New Emission Units:**

  Generally use "Actual to Potential Test" - Compare Past Actual Emissions to Future Potential Emissions

- **EUSGUs:**

  The "WEPCO Test" - Compare Actual to Representative Actual Annual Emissions.

Actual-to-Projected-Actual Test
New Requirements

- Apply to all changes at existing emissions units
- Sources must make a projection of post-change annual emissions:
  - Project maximum annual emissions for the 5-year period after the change; or 10-year period after the change (if the change involves an increase in the emissions unit's PTE or capacity)
  - may exclude any emissions increase that the emissions unit could accommodate before the change, and that are unrelated to the change (eg. demand growth)
  - may use potential emissions in making projection (source option; could avoid record keeping)
- New Units must use potential and compare to baseline of zero
- Emission unit replacement can utilize operational data for unit that is being replaced

Recordkeeping and Reporting

- **When there is a reasonable possibility that the project could result in a significant emissions increase (modified from the Federal rule to meet Court remand issue - EPA not providing guidance):**
  - **EUSGUs:**
    - **Submit a notification to the reviewing authority before beginning actual construction (*approval not needed to begin construction)***
    - **Report annual emissions for five years after the change, or 10 years if change increases the emissions unit's PTE or capacity**
  - **Non-EUSGUs:**
    - **Maintain a record of the baseline, projection and annual emissions information for 5 years after the change, or 10 years if the change increases the emission unit's PTE or capacity; and**
    - **Report to reviewing authority if annual emissions result in a significant emissions increase and are inconsistent with the projection**
    - **If projection, prior to exclusions, minus baseline is greater than significant threshold, report to department before beginning actual construction (*approval not needed to begin construction)***
  - **Record keeping not necessary if projection uses PTE**

Applicability Test Example

- **Modification to facility**
  - **Modify Unit A**
  - **Replace Unit B with Unit R**
  - **Construct New Unit C**
- **Modification to Unit A**
  - **Project will not increase capacity of Unit A**
  - **VOC source => Significant threshold 40 TPY**
  - **Potential Emissions = 150 TPY**
  - **Baseline Actual Emission = 50 TPY**
  - **Projected Actual (5 year) = 100 TPY w/o excl**
  - **Projected Actual (5 year) = 60 TPY w/ excl**

Applicability Test Example - 2

- **Replace Unit B with Unit R**
  - **Units B and R have the same capacity**
  - **VOC Source**
  - **Potential Emissions of R = 60 TPY**
  - **Baseline Actual of B = 20 TPY**
  - **Projected Actual of R = 50 TPY prior to exclusion**
  - **Projected Actual of R = 25 TPY after exclusion**
- **New Unit C**
  - **VOC source**
  - **Potential Emissions = 10 TPY**

Applicability Test - Math

- **Unit A**
  - **PTE - BA = 150 - 50 = 100 TPY**
  - **PE(no excl) - BA = 100 - 50 = 50 TPY**
  - **PE (excl) - BA = 60 - 50 = 10 TPY**
- **Units B & R**
  - **PTE - BA = 60 - 20 = 40 TPY**
  - **PE (no excl) - BA = 50 - 20 = 30 TPY**
  - **PE (excl) - BA = 25 - 20 = 5 TPY**
- **Unit C**
  - **PTE = 20 TPY**
- **Net Emissions Increase = 10 + 5 + 20 = 35 TPY**
  - **Prior to Exclusion = 50 + 30 + 20 = 100 TPY Report**

Clean Unit Test

Clean Unit Test

- **Since the Clean Unit Test was vacated by the Court, it will not be included in the revised rule.**

Pollution Control Project Exclusion

Pollution Control Project Exclusion

- **Since Pollution Control Projects were Vacated by the Court, they will not be Included in Rule Revisions**
- **Pollution Control Projects for Utilities will be Removed from Existing Rule**
- **EPA asking Court for Decision on Whether PCP Decision is Retroactive**

Plantwide Applicability Limitations (PALs)

Based on Actual Emissions

[“Actuals PAL”]

Plantwide Applicability Limitations

- **An alternative approach for determining major NSR applicability.**
- **The final rules address only "actuals PALs". EPA *claims* to be proposing provisions for "allowables PALs" at a later date.**
- **A PAL is an annual (facility-wide) emission limitation (12-month rolling total, rolled monthly) under which the facility can make any changes without triggering NSR review for that pollutant.**
  - **Pollutant-specific**
  - **10-year term**
- **A PAL for VOC or NOx is not allowed in an extreme ozone nonattainment area.**

Establishing a PAL

- **Determine baseline actual emissions for all existing emissions units using the same consecutive 24-month period for all units. (However, you may add the PTE for any emissions unit that was added to the major stationary source after the selected 24-month period);**
- **Add the pollutant-specific significant emissions rate to the baseline actual emissions for the PAL pollutant;**
- **Subtract any emissions from emissions units that operated during the 24-month period and have since been permanently shut down; and**
- **Establish a step-down PAL if there are any requirements that have an effective date during the term of the PAL.**

- **Past NSR avoidance limitations may be lifted once the PAL is established**

Calculating a PAL

- VOC PAL, Significant Threshold = 40 TPY
- Choose 1999-2000 as Baseline Period
  - 10 VOC Emissions Units
  - 250 tons in 1999, 350 tons in 2000, thus BA 300
- 3 Units installed after 2000
  - Combined PTE = 230 TPY
- Removed 2 Units Since 2000
  - Average Actual in 1999-2000 = 50 TPY
- 2 Units Required to reduce by 10 TPY each in 2004 due to rule change
- PAL = 40 + 300 + 230 - 50 - 20 = 500 TPY

Reopening PAL permits

- **Reviewing Authority shall reopen the PAL permit to:**
  - **Correct typographical or calculation errors made in settling the PAL.**
  - **Reduce the PAL to create emissions reductions for offset purposes.**
  - **Revise the PAL to reflect an increase in the PAL.**
- **Reviewing Authority may reopen the PAL permit to:**
  - **Reduce the PAL to reflect newly applicable Federal requirements with compliance dates after the PAL effective date**
  - **Reduce the PAL consistent with any other requirement that the State may impose under its SIP**
  - **Reduce the PAL if it determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation.**

Increasing a PAL

- **Allowed if the increased emissions cannot be accommodated under the PAL, even if all significant and major emissions units were to meet a BACT level of control.**
- **Emissions units causing the need for an increase (modified or new units) must go through major NSR.**
- **New PAL based on sum of:**
  - **Baseline actual emissions of small emissions units;**
  - **Baseline actual emissions of significant and major emissions units assuming a BACT level of control; and**
  - **Allowable emissions of new or modified emissions units.**

PAL Renewal

- If baseline actual emissions plus significant level are ≥ 80% of current PAL, then PAL may be renewed at current level.
- If baseline actual emissions plus significant level are ≤ 80% then:
  - PAL may be established at a level that is more representative of baseline actual emissions, or a level that is appropriate based on air quality needs or other considerations.
- The new PAL level cannot be higher than the existing PAL (unless PAL increase provisions are met) or the PTE of the source.

PAL Expiration

- **Within the timeframe specified for PAL renewals, the source shall submit a proposed allocation to each emissions unit.**
- **The PA shall decided whether and how the PAL will be distributed and issue a revised permit incorporating allowable limits for each emissions unit.**
- **Any subsequent physical or operational change at the source will be subject to major NSR review.**

PAL Monitoring Requirements

- **PAL permit must contain enforceable requirements to determine plantwide emissions (12-month rolling total, rolled monthly).**
- **A source may use any of the following approaches:**
  - **Mass balance calculations for activities using solvents or coatings**
  - **Continuous Emissions Monitoring Systems (CEMS)**
  - **Continuous Parameter Monitoring Systems (CPMS) or Predictive Emissions Monitoring Systems (PEMS).**
  - **Emissions Factors.**
- **If no monitoring data exists for an emissions unit for a time period, the source owner must report the maximum potential emissions without considering enforceable or operating emissions limitations.**

The Rest of the Loaf

- **Minor (NR 406) NSR Exemptions**
- **Minor NSR Applicable**
- **Title V Revisions**

Minor NSR Exemptions

- Establishing a PAL
- Modifications under a PAL if:
  - No Ambient Air Quality Issues
  - Not NSPS or NESHAPS
  - If New Unit is Small Emissions Unit
- Applicability Test
  - No Ambient Air Quality Issues
  - Not NSPS or NESHAPS
  - Does not required restriction on PTE
- Emissions units modified or constructed under exemptions listed above are considered modified/new for other rules, unless otherwise exempt from NR 406

Minor NSR Applicable

- **Modifications under a PAL if:**
  - **Ambient Air Quality Issues**
  - **NSPS or NESHAPS**
  - **If New Unit is Significant or Major Emissions Unit**
- **Applicability Test**
  - **Ambient Air Quality Issues**
  - **NSPS or NESHAPS**
  - **Requires restriction on PTE**

Title V Permit Changes

- **Minor Revisions**
  - **Changes that are exempt from NR 406**
  - **Changes that are permitted under NR 406**
- **Significant Revisions**
  - **Establishment of a PAL**
  - **PAL can't be utilized until effective**
- **When Can Construction Commence**
  - **If 406 permit required, after permit is issued**
  - **If 406 permit not required, after revision application received**

Program Support

- **Implementation Fees Added to NR 410**
  - **$10,150 for Establishment of PAL**
    - **($8,000 base + $2,150 synthetic minor condition)**
  - **$4,400 modifications of PAL source reviewed under 406**
    - **Base fee for const. permit at Part 70 source**
  - **$1,100 those modifications at PAL sources that are exempt from 406**
    - **Base fee for const. permit revision**
  - **$700 modeling, if applicable**
    - **Modeling for minor NSR permit**
  - **$4,400 for determination of exemption under applicability test**
- **Based upon estimated work effort and past experience**
- **Applicable only when Department action is requested or required**

Fee Comparison in Region 5

- All States in Region 5 agree that fees are necessary to support NSR reform work
- All States in Region 5 using structure of existing NSR program funding to base fee
- However, Region consists of many different fruits, thus apple to apple comparison difficult

Delegated States

- **Minnesota**
  - **NSR funded through emissions fees and grants**
  - **No cap on emission fees**
  - **Found that PAL is highly resource intensive**
- **Michigan**
  - **NSR funded through emissions fees, grants and other general purpose revenue**
  - **Believe additional fees would be necessary but wrong time to ask for fees to cover exemptions**
  - **Limited experience, but fund as mentioned**
- **Illinois**
  - **Just received authorization to fund NSR using program revenue**
  - **Will use to fund exemptions**
  - **Currently using emission fees, grants and general purpose revenue**

SIP States

- **Ohio**
  - **Just submitted NSR rule to EPA**
  - **Will fund using existing NSR fee structure**
  - **NSR supported by program revenue**
- **Indiana**
  - **Has submitted NSR rule to EPA**
  - **PALs**
    - **$40 per ton up to $40,000, per pollutant**
  - **Modeling - $700**
  - **Fees for exemption determinations**

Rule Development Schedule

- October 14: Re-Draft Rule for Public Comment
- November 2005 : Public Hearings on Draft rule
  - Stevens Point (16th) and Madison (18th)
- December 2005: Final Green Sheet for rule adoption to NRB - Provide to EPA for SIP “preview”
- January 2006: NRB Requesting Adoption
- February 2006: Legislative review of final rule
- March-April 2006: Formal SIP Submittal
- April-May 1, 2006: Publication of rule in Admin. Code and rule becomes effective; however:
- Implementation will not occur until SIP Approved